Project Scope Management
Study Notes
Points to Note


• The study notes explain topics that are important for PMP® exam preparation and you can expect several questions from these topics.

• Pay close attention to all the terms used. It is very important to understand all the concepts discussed in this chapter.

• Try to relate the concepts to real life examples.

• After reading the study notes, please answer the chapter test questions in this knowledge area. The chapter questions improve your understanding of the concepts discussed in the study notes.
What is Project Scope Management?

- Project Scope Management includes processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully.

- Please note that “gold plating,” i.e., including features and requirements in the product or deliverable not originally planned, is not a recommended practice.

- Major scope management processes include:
  - Collect Requirements
  - Define Scope
  - Create WBS
  - Verify Scope
  - Control Scope
## Product Scope vs. Project Scope

<table>
<thead>
<tr>
<th>Product Scope</th>
<th>Project Scope</th>
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</thead>
<tbody>
<tr>
<td>Features and functions that characterize a product or service.</td>
<td>Work that must be done to deliver a product</td>
</tr>
<tr>
<td>Processes, tools and techniques required vary by application area – defined as part of the product life cycle</td>
<td>Processes, tools and techniques required vary by application areas – defined in project life cycle</td>
</tr>
<tr>
<td>Defined in product life cycle (not defined in this chapter – differs depending on the industry)</td>
<td>Defined in project life cycle – discussed in this chapter</td>
</tr>
<tr>
<td>Completion of product scope measured against the product requirements</td>
<td>Completion of project scope measured against the project management plan</td>
</tr>
<tr>
<td>A product may have several subsidiary components with their own separate but independent product scopes</td>
<td>A project generally results in a single product or deliverable</td>
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Processes in Project Scope Management

- Processes in Project Scope Management are Collect Requirements, Define Scope, Create WBS, Verify Scope, and Control Scope.

  - Understand all the processes—their inputs, tools and techniques, and outputs—very well.
  - Try to relate the processes to real-life cases that you have come across in your projects.
Product Scope Description

- Documents the characteristics of the product or service that the project was undertaken to create

- Is progressively elaborated (i.e., gets better defined as the project progresses)

- Should be detailed enough to support project planning
Collect Requirements

• Collect Requirements process involves:
  ◦ Defining and documenting stakeholders’ needs to meet the project objectives
  ◦ Defining and managing customer expectations

• Tools and Techniques used:
  ◦ Interviews
  ◦ Focus groups
  ◦ Group creativity techniques
  ◦ Facilitated workshops
  ◦ Group decision making techniques
  ◦ Prototypes
  ◦ Observations
  ◦ Questionnaires and surveys
Collect Requirements (continued…)

- Outputs are:
  - Requirements Documentation:
    • Describes how individual requirements meet the business need for the project.
  - Requirements management plan:
    • Documents how requirements will be analyzed, documented, and managed throughout the project.
  - Requirements Traceability Matrix:
    • Links requirements to their origin.
    • Traces requirements throughout the project life cycle.
Product Analysis

- Required for a better understanding of the product of the project

- Techniques used:
  - Product breakdown
  - Systems analysis
  - Requirements analysis
  - Systems engineering
  - Value engineering
  - Value analysis
Project Scope Statement

• Provides a documented basis for making future project decisions
• Helps to develop common understanding among all stakeholders
• May need to be revised if there are scope changes

• Includes:
  ◦ Project justification
  ◦ Project’s product
  ◦ Project deliverables
  ◦ Project objectives
Scope Management Plan

• Includes:
  ◦ How project scope will be managed
  ◦ How scope changes will be integrated into the project
  ◦ How the expected stability of project scope will be assessed (i.e., determining the probability for its change)
  ◦ How scope changes will be identified and classified; will be done when product characteristics are being elaborated

• May be formal or informal, highly detailed or broadly framed, based on the needs of the project

• Subsidiary plan of the project management plan
Define Scope

- Process to develop a detailed description of the project and product

- Benefits:
  - Improves accuracy of cost, duration, and resource estimates
  - Defines baseline for performance measurement and control
  - Facilitates clear responsibility assignments

- Poor scope definition results in:
  - Higher final project costs
  - Changes that disrupt the project rhythm
  - Rework
  - Increase in project time
  - Lower productivity
  - Lower morale of workforce
Decomposition

- Subdividing the major project deliverables or sub-deliverables into smaller, more manageable components until the work and deliverables are defined to the work package level.

- Steps:

  1. Identify major deliverables
  2. Can cost and duration estimates be developed at this level of detail?
  3. Identify constituent components of the deliverable
  4. Verify Correctness of Decomposition
Work Breakdown Structures (WBS)

• Very important topic – you can surely expect some questions on WBS, WBS dictionary, and work packages.

• Definition: WBS is a deliverable-oriented hierarchical decomposition of the work to be executed by the project team to accomplish the project objectives and create the required deliverables.

• The WBS is finalized by establishing control accounts for the work packages and a unique identifier from a code of accounts.

• These identifiers provide a structure for hierarchical summation of costs, schedule, and resource information.

• Control accounts are placed at selected management points in the WBS.
Work Packages and WBS Dictionary

• Work packages:
  ◦ Are the lowest level of the WBS
  ◦ May be further decomposed into subproject work breakdown structure

• WBS dictionary:
  ◦ Provides more detailed descriptions of the components in the WBS
  ◦ Includes:
    • Work package descriptions
    • Control accounts descriptions
Inspection

- Is a tool and technique in Verify Scope process

- Is also called:
  - Review
  - Product review
  - Audit
  - Walkthrough

- Includes activities like measuring, examining, and testing to determine whether results conform to requirements
Scope Changes

- Modifications to an agreed upon project scope as defined in the WBS

- Will require adjustments to:
  - Cost
  - Time
  - Quality
  - Other project objectives

- What happens if scope changes?
  - Scope changes are fed back through the planning process
  - Technical and planning documents are updated as needed
  - Stakeholders are notified
Control Scope

- Control Scope is a process to monitor the status of the project and product scope and manage changes to the scope baseline.

- The project management plan contains the following information that is used to control scope:
  - Scope baseline
  - Scope management plan
  - Change management plan
  - Configuration management plan
  - Requirements management plan

- In variance analysis, project performance measurements are used to assess the magnitude of variation from the original scope baseline.